

REMARKS

Claims 1-40, 47 and 48 are canceled; claims 41-44 are amended; and claims 41-46 are pending in the application.

The pending claims stand rejected over Ying or Iwasaki. Applicant respectfully requests reconsideration of such rejections.

Referring initially to claim 44, such recites a circuit construction comprising a substrate; substantially crystalline electrically insulative material over the substrate; openings extending within the substantially crystalline electrically insulative material; and electrically conductive material within the openings and corresponding to quantum dots. The claim further recites that the substantially crystalline electrically insulative material consists essentially of Ta₂O₅.

The Examiner recognizes that the cited references do not specifically disclose the claim 44 recited substantially crystalline electrically insulative material consisting essentially of Ta₂O₅. However, the Examiner notes that the references (the Examiner specifically refers to Ying, but the Examiner's comments could equally applied to Iwasaki) teach utilization of electrically insulative material consisting of aluminum oxide, and contends that it would be obvious to a person of ordinary skill in the art to recognize that titanium oxide could be substituted for the aluminum oxide.

Applicant respectfully submits that the Examiner's contention regarding the obviousness of substituting titanium oxide for aluminum oxide is not supported by the prior art, and accordingly lacks appropriate basis for a §103 rejection. Applicant first notes that each of the cited references specifically utilizes aluminum oxide as the insulative material

because the references are utilizing anodization of the aluminum oxide to form pores within the aluminum oxide suitable for ultimate patterning of nanostructures (see, for example, column 9, lines 1-36 of Ying; and paragraph 0057 of Iwasaki). Nothing within the references teaches that tantalum oxide would have suitable properties which would enable pores to be formed therein appropriate for subsequent patterning of nanostructures. Since there is no teaching within the prior art that tantalum oxide will form nanostructure pores analogous to those formed in aluminum oxide, there would not be motivation for a person of ordinary skill in the art to replace the aluminum oxide of the cited references with tantalum oxide.

Since a person ordinary skill, the art would not be motivated to replace the aluminum oxide of the cited references with tantalum oxide, the cited references do not render the subject matter of claim 44 obvious. Applicant therefore requests allowance of claim 44 in the Examiner's next action.

Claims 41, 45 and 46 depend from claim 44, and are therefore allowable for least the reasons for which claim 44 is allowable.

Referring next to claims 42 and 43, such recited circuit constructions comprising electrically conductive material within openings in substantially crystalline electrically insulative material, with the electrically conductive material corresponding to quantum dots, and comprising titanium (claim 42) or tungsten (claim 43).

The Examiner contends that claims 42 and 43 are obvious over Iwasaki, and specifically that it would have been obvious to substitute titanium or tungsten for the

electrically conductive materials disclosed in Iwasaki. Applicant respectfully requests reconsideration of such rejections.

Iwasaki specifically discloses that the metals cobalt, copper and nickel can be utilized to form nanostructures within pores in electrically insulative material through electrodeposition of the metals within nanoholes (see, for example, paragraph 0102 of Iwasaki). Nothing within the cited references suggests or discloses that either titanium or tungsten could be suitably electrodeposited within nanoholes, and accordingly there is no suggestion which would motivate a person of ordinary skill in the art to substitute either tungsten or titanium for the specific metals disclosed in the nanostructures of Iwasaki. Accordingly, the prior art does not render the subject matter of claims 42 and 43 obvious.

Claims 41-46 are allowable for the reasons discussed above, and applicant therefore requests formal allowance of such claims in the Examiner's next action.

Respectfully submitted,

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By: 

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